

**UNITED STATES DEPARTMENT OF COMMERCE****Patent and Trademark Office**

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*ASJ*

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.
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08/748,935 11/13/96 IMAI

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020277  
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WASHINGTON DC 20005-3096

LM02/0118

EXAMINER

NGUYEN, T

ART UNIT

PAPER NUMBER

2779

DATE MAILED:

01/18/00

*14*

**Please find below and/or attached an Office communication concerning this application or proceeding.**

**Commissioner of Patents and Trademarks**

## Office Action Summary

Application No. <b>08/748,935</b>	Applicant(s) <b>Iai; Fujii; Fujiwara; Sakagawa; Nakagawa; Matsuu</b>
Examiner <b>Thu Nguyen</b>	Group Art Unit <b>2772</b>

Responsive to communication(s) filed on Nov 3, 1999

This action is **FINAL**.

Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11; 453 O.G. 213.

A shortened statutory period for response to this action is set to expire three month(s), or thirty days, whichever is longer, from the mailing date of this communication. Failure to respond within the period for response will cause the application to become abandoned. (35 U.S.C. § 133). Extensions of time may be obtained under the provisions of 37 CFR 1.136(a).

### Disposition of Claims

Claim(s) 1-28 is/are pending in the application.

Of the above, claim(s) \_\_\_\_\_ is/are withdrawn from consideration.

Claim(s) \_\_\_\_\_ is/are allowed.

Claim(s) 1-28 is/are rejected.

Claim(s) \_\_\_\_\_ is/are objected to.

Claims \_\_\_\_\_ are subject to restriction or election requirement.

### Application Papers

See the attached Notice of Draftsperson's Patent Drawing Review, PTO-948.

The drawing(s) filed on \_\_\_\_\_ is/are objected to by the Examiner.

The proposed drawing correction, filed on \_\_\_\_\_ is  approved  disapproved.

The specification is objected to by the Examiner.

The oath or declaration is objected to by the Examiner.

### Priority under 35 U.S.C. § 119

Acknowledgement is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d).

All  Some\*  None of the CERTIFIED copies of the priority documents have been received.

received in Application No. (Series Code/Serial Number) \_\_\_\_\_.

received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

\*Certified copies not received: \_\_\_\_\_

Acknowledgement is made of a claim for domestic priority under 35 U.S.C. § 119(e).

### Attachment(s)

Notice of References Cited, PTO-892

Information Disclosure Statement(s), PTO-1449, Paper No(s). \_\_\_\_\_

Interview Summary, PTO-413

Notice of Draftsperson's Patent Drawing Review, PTO-948

Notice of Informal Patent Application, PTO-152

--- SEE OFFICE ACTION ON THE FOLLOWING PAGES ---

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## **DETAILED ACTION**

### ***Claim Rejections - 35 USC § 103***

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. Claims 1-28 are rejected under 35 U.S.C. 103(a) as being unpatentable over Letcher, Jr. (U.S Patent No. 5,627,949).

As per claim 23, Letcher teaches a computer implemented method of generating a three-dimensional form data. The method comprises the steps of: generating a plurality of lines and projecting the lines to generate a group of curves along a surface of a three dimensional form model (fig.27; col.12, lines 41-43; col.15, lines 60-67; col.16, lines 1-23); and modifying the group of curves by moving a curve in the group (col.3, lines 50-63; col.16, lines 30-37 and col.13, lines 57-67). Letcher does not explicitly teach moving a curve or curves along a surface of the three dimensional form model. However, Letcher teaches changing the coordinate of a control point of a curve on the surface of the model (col.16, lines 5-8 and lines 30-37), it would have been obvious to a person of ordinary skill in the art at the time the invention was made that when a control point of a curve is changed, the curve is changed according to the control point. Since the curve depends on the surface of the model, when the curve is changed, the surface of the model

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must change to contain the curve, this fact implies that the curve change along the surface of the model as claimed.

As per claim 24-25, refer to discussion in claim 23 above. Further, Letcher teaches adding a curve to the group of curves as claimed (col.13, lines 63-65) and deleting a curves from the group of curves as claimed (col.13, lines 65-67).

As per claim 26-28, refer to discussion in claims 23-25 above. The claimed software and medium for executing the program is the extend of the claimed method above.

As per claim 1, refer to discussion in claim 23 above. Further, Letcher teaches generating horizontal two-dimensional closed curves as claimed (col.16, lines 1-5).

As per claim 2, Letcher teaches parametric curve group (col.9, lines 24-30).

As per claim 3, Letcher teaches moving the control points of the parametric curve group (col.16, lines 30-38).

As per claim 5, Letcher teaches spline curve group (col.16, lines 1-3).

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As per claim 4 and 6, using display device to generate the three-dimensional form data would have been well known to a person of ordinary skill in the art at the time the invention was made.

As per claim 7-8, refer to discussion in claims 1 and 24 above.

As per claim 9, refer to discussion in claim 1 above. The claimed computer medium is the extent of the claimed method of claim 1 above.

As per claim 10-12, the claimed memory devices would have been well known to a person of ordinary skill in the art at the time the invention was made.

As per claim 13-22, refer to discussion in claims 7-13 above.

#### *Response to Arguments*

3. Applicant's arguments filed 11/3/99 have been fully considered but they are not persuasive. In response to applicant's argument on page 3, third and fourth paragraphs, and page 4, Letcher does teach editing a line along the surface of the three-dimensional object. Refer to explanation in claim 23 in the 35 USC 103 section above. This explanation is a broad interpretation of the claims vs. the reference, because no matter how the lines are moved, the

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surface of the model always contain the line, this implies changing the lines along the surface of a model. Further, since applicant does not claim "the three-dimensional form model is not changed" in any claim, this limitation is excluded from consideration. Even with narrower interpretation of the claims vs. Letcher Jr. teachings, Letcher Jr. does imply changing the lines along the surface of a model. Refer to the enclosed copy of fig. 27 of Letcher's (next page of this office action (page 5b)); explanation is concentrated in surface 279 and points 280, 281 and vertical line connecting the two points 281-282 (the numbers 280-282 are inserted by examiner). Drag the point 280 along the arrow A (drawn by examiner), the surface at points 281-282 is not changed, However, the line connecting point 281-282 moves to 281'-282 along the unchanged part of the surface 279 of the model.

Further, on page 3, last paragraph, applicant argues that Letcher does not teach any model. However, in fig.27, Letcher teaches the model of a ship. Moreover, since Letcher teaches the coordinate points of the ship (col.21, lines 8-30 and col.22), Letcher inherently teaches the model of a ship, because the coordinate points are the representation of a model.

Applicant is suggested to review col.12, lines 60-62; col.15, lines 50-67 and col.16 lines 1-37 which teaches projecting lines on a surface of a model and modifying the lines. The suggested sections teaches the claimed limitations and are related to examiner explanation.

4. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

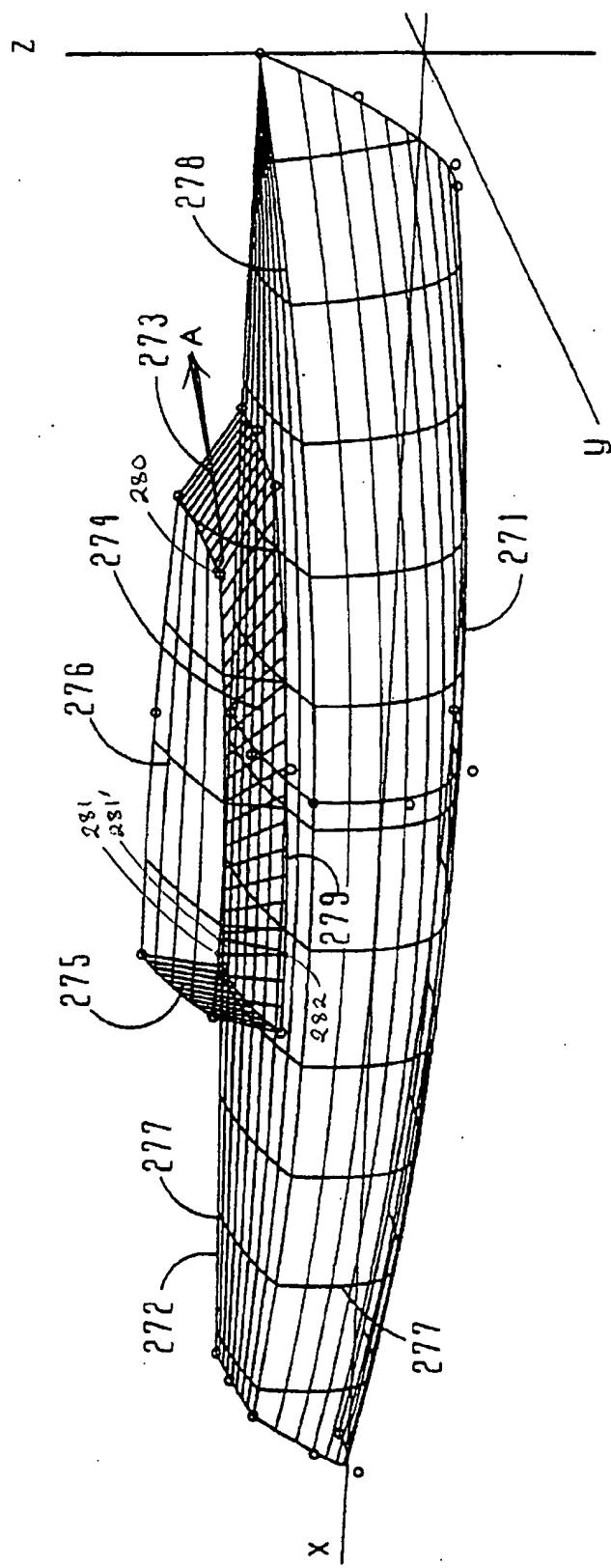
U.S. Patent

May 6, 1997

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FIG. 27 Example Application



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A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

**Any response to this final action should be mailed to:**

**Box AF**

Commissioner of Patents and Trademarks  
Washington, D.C. 20231

**or faxed to:**

(703) 308-9051, (for formal communications; please mark "EXPEDITED PROCEDURE")

**Or:**

(703) 308-6606 (for informal or draft communications, please label "PROPOSED" or "DRAFT")

Hand-delivered responses should be brought to Crystal Park II, 2121 Crystal Drive, Arlington, VA., Sixth Floor (Receptionist).

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Any inquiry concerning this communication or earlier communications from the examiner should be directed to Thu Nguyen whose telephone number is (703) 306-9130. The examiner can normally be reached on Monday-Thursday from 8:00 am to 5:00 pm ET.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Mark Powell, can be reached on (703) 305-9703. The fax phone number for this Group is (703)308-6606 .

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the Group receptionist whose telephone number is (703)305-3900.

NTV

January 4, 2000



MARK R. POWELL  
SUPERVISORY PATENT EXAMINER  
GROUP 2700